

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of

Amendment of the Commission's  
Part 90 Rules in the 904-909.75  
and 919.75-928 MHz Bands

)  
)  
)  
)  
)  
)  
)

WT Docket No. 06-49

**REPLY COMMENTS OF  
PCS PARTNERS, L.P.**

David G. Behenna  
PCS Partners, LP

Mark J. Tauber  
Michael A. Signorelli

**DLA PIPER RUDNICK GRAY CARY US, LLP**  
1200 Nineteenth Street, N.W.  
Washington, D.C. 20036  
202-861-3900

Its Attorneys

June 30, 2006

## Table of Contents

Introduction and Summary.....	1
I. Discussion.....	2
II. The Commission should amend its rules to allow for the development and deployment of new, innovative services by LMS licensees.....	3
III. PCS Partners supports Progeny’s recommended technical standards.....	5
IV. Certain arguments made by commenters opposed to the NPR are overbroad and potentially misleading.....	6
V. PCS Partners Agrees with the Commission’s Established Rules and Spectrum Allocation Policies.....	8
VI. Conclusion.....	11

**Before the  
FEDERAL COMMUNICATIONS COMMISSION  
Washington, D.C. 20554**

In the Matter of

Amendment of the Commission's  
Part 90 Rules in the 904-909.75  
and 919.75-928 MHz Bands

)  
)  
)  
)  
)  
)  
)

WT Docket No. 06-49

**REPLY COMMENTS OF  
PCS PARTNERS, L.P.**

**INTRODUCTION AND SUMMARY**

PCS Partners, L.P. ("PCS Partners"), by and through counsel, pursuant to 47 C.F.R. §1.2108(c), hereby replies to comments filed in response to the Notice of Proposed Rulemaking ("NPR") issued by the Federal Communications Commission ("FCC" or "Commission") requesting comment on proposed amendments to Part 90 of the Commission's rules governing location and monitoring services ("LMS").<sup>1</sup> PCS Partners holds FCC Spectrum Licenses, has participated in a number of Spectrum Auctions, including those held for location monitoring service ("LMS") licenses, and was an active participant in Progeny's Petition for Amendment of Part 90 of the FCC's rules.<sup>2</sup>

---

<sup>1</sup> See In the Matter of Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, Notice of Proposed Rulemaking, 71 FCC Rcd. 15658 (March 29, 2006) ("NPR").

<sup>2</sup> See Petition of Progeny LMS, LLC for Amendment of Part 90 of the Commission's Rules Governing the Location and Monitoring Service to Provide Greater Flexibility, RM-10403 (June 3, 2002). ("Progeny Petition").

PCS Partners commends the Commission for its proposed rulemaking to provide LMS licensees the regulatory flexibility to develop and deploy new services. Specifically, PCS Partners supports Progeny LMS' Comments and agrees that the ability of LMS licensees to develop and deploy economically viable LMS networks and services is substantially constrained by the operational and technical limitations that the Commission applied to LMS services between nine and eleven years ago.<sup>3</sup> Although these limitations may have been an appropriate means for mitigating the likelihood of interference among primary and secondary users of the 902-928 MHz band, supervening technological advancements and marketplace changes have rendered those limitations counter-productive. The modification proffered by Progeny will provide LMS licensees the regulatory flexibility to respond to changing market conditions.

## I. DISCUSSION

The Commission has previously established that its policy is to assign spectrum in a manner that will "provide the greatest benefit to the American public."<sup>4</sup> Moreover, the Commission has modified its rules to provide additional flexibility for Part 15 operators.<sup>5</sup> As further discussed below, it would contradict that policy and be inconsistent with those decisions

---

<sup>3</sup> See Comments of Progeny LMS, LLC for In the Matter of Amendment of the Commission's Part 90 Rules in the 904-909.75 and 919.75-928 MHz Bands, Notice of Proposed Rulemaking, WT Docket No 06-49 (May 30, 2006) (*"Comments of Progeny"*).

<sup>4</sup> See Principles for the Reallocation of Spectrum to Encourage the Development of Telecommunications Technologies for the New Millenium, Policy Statement, 14 FCC Rcd 19869 (1999) at paras. 7-9. (*"Spectrum Policy Statement"*).

<sup>5</sup> See Amendment Of Part 15 Of The Commission's Rules Regarding Spread Spectrum Devices, Second Report And Order, ET Docket No. 99-231, Rel. May 30, 2002, FCC No. 02-15; 1998 Biennial Regulation Review-Conducted Emissions Limits Below 30 MHz For Equipment See *1995 LMS Order*, 10 FCC Rcd 4695, at para. 5.

if the Commission were to refuse modify its rules to enable LMS licensees to develop and deploy innovative services pursuant to technological and policy options that may permit such flexibility without risking undue interference with Part 15 operators. The Commission should adopt Progeny's recommendations to reconcile its LMS rules with the technology and market changes that have occurred in the wireless arena since the LMS rules were first established, and thereby promote the interests of all present and potential users of the 902-928 MHz band.

**II. The Commission should amend its rules to allow for the development and deployment of new, innovative services by LMS licensees.**

When the Commission initially established its LMS rules, it assumed that its action would precipitate the development of advanced transportation-related services, alternatively named "Intelligent Vehicle Highway Systems ("IVHS")" or "Intelligent Transportation Systems ("ITS")."<sup>6</sup> These systems were expected to help to "improve the efficiency and safety of the nations highways, reduce harmful automobile emissions, promote efficient energy use, and increase national productivity" by providing traffic, navigational and other information to motorists.<sup>7</sup> Needless to say, in the eleven years since the establishment of the LMS rules, wireless traffic, navigational and other information services have become available to motorists, but through CMRS, GPS, and other such services, rather than through LMS. Moreover, these non-LMS services now compete for the market that LMS licensees were intended to serve, but the Commission's rules currently prevent LMS licensees from developing new products that can compete against these non-LMS services. Regardless of how "carefully crafted" the FCC's LMS

---

<sup>6</sup> See *1995 LMS Order*, 10 FCC Rcd 4695, at para. 5.

<sup>7</sup> *Id.*

rules were when they were established, the paradigms of the wireless and capital markets have fundamentally changed in the years since these rules were last addressed, rendering the LMS rules ripe for modification. Therefore, the Commission should eliminate or modify the “safe harbor” and other rules which currently limit the ability of LMS licensees to develop new and innovative services. The Commission will best serve the public’s interest by adopting Progeny’s recommended technical parameters and by applying the FCC’s spectrum allocation policy to the 902-928 MHz band.

It would be inappropriate for the Commission to decline to provide regulatory flexibility because of generalized interference concerns voiced by certain Part 15 operators. The relative lack of investment and consumer interest in the LMS arena, as compared to the substantial investment and consumer interest in other wireless sectors, indicate that it is appropriate for the Commission to modify LMS rules and eliminate LMS restrictions that are frustrating investment in and development of that spectrum. The commenters opposed to the proposed rulemaking hypothesize that a rule amendment will have negative implications for Part 15 users. Certainly, the Commission should address the legitimate concerns of Part 15 operators, even if those concerns are somewhat overstated. However, as demonstrated by Progeny, the Commission can provide needed relief to LMS licensees while not increasing the potential risk of interference.<sup>8</sup> Progeny has shown that LMS licensees can develop and deploy innovative services, demanded by the market, at current power levels without undue interference.<sup>9</sup>

---

<sup>8</sup> See Progeny Comments.

<sup>9</sup> *Id.*

### III. PCS Partners supports Progeny's recommended technical standards.

PCS Partners fully supports Progeny's recommendation regarding eliminating service restrictions, modifying or eliminating the safe harbor, and applying technical parameters to both licensed and unlicensed operations.<sup>10</sup> As recommended by Progeny, the Commission should "eliminate all restrictions on the type of and content of messages that can be carried by M-LMS systems."<sup>11</sup> Also, LMS licensees should not be limited to offering transmission of status and instructional related messages regarding location-only functions. Such a restriction does not utilize the spectrum to its greatest value. LMS licensees should be able to offer more robust services that the market demands. Competition from CMRS and GPS providers has rendered vehicle location services in this band non-competitive. As a result, the Commission should allow LMS licensees to expand their service offerings to include real-time interconnection with the public switch telephone network. Through the use of new, more efficient technology, LMS licensees may offer competitive voice services, while not increasing the risk of interference to other band operators. Furthermore, the Commission should adopt a scheme that encourages users to employ the most efficient technology to cope with spectrum constraints.<sup>12</sup>

Based on the technical analysis conducted by Progeny, it is clear that LMS licenses can deploy new services at current power levels without increasing the significant risk of interference.<sup>13</sup> With advancements in power control, interference avoidance, spread spectrum techniques, mesh networking architecture and smart antennas, concerns by Part 15 operators are

---

<sup>10</sup> *Progeny Comments* at 5.

<sup>11</sup> *Id.* at 5 and 8.

<sup>12</sup> *Id.* at 15.

<sup>13</sup> *See Progeny Comments* at Appendix A – White Paper.

unfounded. By deploying efficient technology all band operators should be able exist in harmony. In addition, Progeny demonstrated that at 30 Watts ERP LMS licensees can deploy new services with out increasing the risk to interference.<sup>14</sup> By Contrast, lowering power settings is not an effective solution to decreasing the risk of interference. At lower powers, additional antennas will be needed, thereby increasing potential for interference and raising costs for build-outs. The increased cost will discourage investment, undermining the objective of the NPR.<sup>15</sup>

PCS Partners also agrees with Progeny's position to eliminate spectrum aggregation restrictions and field testing conditions. Spectrum aggregation would facilitate the reduction of interference of LMS systems to Part 15 devices by allowing interference avoidance techniques to operate over larger bandwidth. The Commission must eliminate the field testing conditions. Compliance with these rules is not practical. It is not possible to identify Part 15 devices operating in a geographic area and a lack of engineering standards renders the rules ineffective and counter-productive.<sup>16</sup>

#### **IV. Certain arguments made by commenters opposed to the NPR are overbroad and potentially misleading.**

Several commenters oppose the Rulemaking and possible modification, claiming that amendments to the rules are at the expense of license-exempt Part 15 operators and that providing additional flexibility for LMS licensees would eliminate the possibility of Part 15 devices coexisting with LMS operators in the 902-928 MHz band. We believe that it is grossly incorrect to characterize this matter as a "zero-sum" game pitting LMS licensees against Part 15 operators. Such attempts to balkanize this matter are not conducive to reasonable consideration

---

<sup>14</sup> *Id.* at 23.

<sup>15</sup> *Id.* at 30.

<sup>16</sup> *Id.* at 42.



of the technical issues, Commission policies, and specific interests of the various parties that may be affected by modification of the LMS rules.

Commenters opposed to the Rulemaking overstate the potential impact of modifications to the LMS restrictions. The proposed rules do not request modification of the LMS spectrum allocation, nor do they request that the hierarchy of primary and secondary users of the 902-928 MHz spectrum be disturbed to benefit LMS licensees. In its 1997 LMS Order, the Commission stated that the 902-928 MHz band is allocated for primary use by Federal Government radiolocation systems, then for Industrial, Scientific and Medical ("ISM") devices. Next in priority are Federal Government fixed and LMS operations. The LMS spectrum allocation is limited to three discrete blocks: (1) 904.000–909.750 and 927.75–928.000 MHz; (2) 919.750–921.750 and 927.500–927.750 MHz; and (3) 921.750–927.250 and 927.250–927.500 MHz, covering slightly more than 50% of the available spectrum in the 902-928MHz band. Subordinates to these users are licensed amateur radio operations and unlicensed Part 15 equipment.<sup>17</sup> Part 15 devices are generally permitted to operate on any frequency, except in designated restricted bands.<sup>18</sup> All Part 15 devices operate contingent upon their non-interference with authorized radio services. In addition, Part 15 devices are supposed to accept any interference received from other radio operations.

Certain arguments presented by these commenters depict unsubstantiated and possibly technologically flawed worst-case outcomes from an LMS rulemaking. Contrary to these arguments, as illustrated in Progeny's Comments, the modified rules do not threaten Part 15

---

<sup>17</sup> See Amendment of Part 90 of the Commission's Rules to Adopt Regulations for Automatic Vehicle Monitoring Systems, PR Docket No. 93-61, Report and Order, 10 FCC Rcd 4695 (1995) ("1995 LMS Order"); Memorandum Opinion and Order and Further Notice of Proposed Rulemaking, 12 FCC Rcd 13942, at para 4 (1997) ("1997 LMS Order").

<sup>18</sup> See 47 C.F.R. §§ 15.205 and 15.209(a).

operations in the 902-928 MHz band. The Commission should secure for LMS licensees and interested parties the ability to deploy innovative services and to enjoy without unreasonable restraint the protections ordinarily provided a superior position in the hierarchy of spectrum users.

**V. PCS Partners Agrees with the Commission's Established Rules and Spectrum Allocation Policies.**

When the Commission first established its LMS rules, it noted that "LMS systems have the potential to offer a wide array of services that go beyond the mere tracking of vehicles" and that developing "a diversity of LMS services is important to promote competition and continued technological advances."<sup>19</sup> Nevertheless, the Commission adopted certain "safe harbor" restrictions as a practical allowance for certain unlicensed, albeit secondary, users of the 902-928 MHz band.<sup>20</sup> When doing so, however, the Commission clearly stated that while the safe harbor rules were "intended to identify Part 15 and amateur operations that will, in all cases, be deemed not to cause harmful interference to LMS operators,"<sup>21</sup> "unlicensed Part 15 operations have no vested or recognizable right to continued use of any given frequency."<sup>22</sup>

As noted above, the Commission's spectrum policy is intended to provide "the greatest benefit to the American public."<sup>23</sup> Nevertheless, Part 15 operators opposed to the Proposed Rulemaking argue that the Commission should not even entertain the possibility of updating its

---

<sup>19</sup> See *1995 LMS Order*, 10 FCC Rcd 4695, at paras. 19, 20.

<sup>20</sup> *Id.* at paras. 23, 25.

<sup>21</sup> *Id.* at para. 33.

<sup>22</sup> See *1997 LMS Order*, 12 FCC Rcd 13492 at para. 32; *1995 LMS Order*, 10 FCC Rcd 4695, at para. 35; 47 C.F.R. § 15.5.

<sup>23</sup> See *Spectrum Policy Statement*, 14 FCC Rcd 19869 at paras. 7-9.

LMS and safe harbor rules to facilitate the development of new services that can benefit the American public because such modifications may affect Part 15 operators that have “no vested or recognizable right to continued use” of the LMS frequency. This argument is diametrically opposed to the Commission’s spectrum allocation policy and Part 15 rules and grossly overstates the Commission’s intention for establishing the safe harbor rules. Moreover, the Part 15 operators provide no specific economic, technical or public policy benefit to be gained by maintaining the current regulatory scheme, except with regard to their narrow self-interest.

As the Commission is more than aware, the consumer wireless industry has grown and changed dramatically over the past nine years. As discussed in the Progeny Comments, from time to time the Commission has revised its rules to enable spectrum licensees to provide new and innovative services.<sup>24</sup> This policy facilitates the evolution of wireless services by removing out-of-date and service-limiting spectrum use restrictions, while protecting primary spectrum users from interference from secondary and tertiary users.

Furthermore, the Commission has issued several orders modifying its rules to provide additional flexibility to Part 15 operators.<sup>25</sup> Although Part 15 users benefiting from those orders have inferior rights to those held by LMS licensees, we do not fault the Commission’s efforts to provide Part 15 operators with the ability to develop new services. Rather, we encourage the Commission to continue to support flexibility and innovation by removing or redefining the safe harbor and other LMS rules in order to provide LMS licensees with the opportunity to establish innovative consumer services.

---

<sup>24</sup> *Id.* at 13.

<sup>25</sup> *Revision of Part 15 of the Commission’s Rules Regarding Ultra-Wideband Transmission Systems, First Report and Order, ET Docket 98-153, FCC 02-48, rel. Apr. 22, 2002* (amending Part 15 to permit the marketing and operation of new products incorporating ultra-wideband (“UWB”) transmission technology).

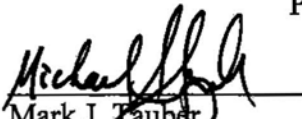
In light of the Commission's actions favoring Part 15 operators, it is somewhat surprising that these operators would argue that LMS licensees should be hamstrung by a lack of regulatory flexibility. Progeny does not request that Part 15 operators be relocated out of the 902-928 MHz band, only that such unlicensed, secondary users be clearly precluded from interfering with the licensed users operating in that spectrum and that LMS licensees should not be subject to unreasonable and unnecessary regulatory limitations. Assuming *arguendo* that the safe harbor and other LMS restrictions were an appropriate means for facilitating the proliferation of Part 15 devices in specific circumstances and at a specific point in time, it is certainly appropriate that the Commission should periodically review those measures and restrictions to ensure that they continue to promote, rather than restrict, innovation and deployment of both licensed and unlicensed services. Ten years is an appropriate time to revisit the rules, especially in light of the failure of the current band plan.

## VI. CONCLUSION

In sum, band restrictions have unnecessarily prevented LMS licensees from providing other services made feasible by technology advancement and demanded by changing markets. Through the use efficient technology and band flexibility, licensees and Part 15 operators may make more efficient use of spectrum while minimizing interference. The arguments presented by commenters opposed to the proposed rulemaking do not demonstrate that the proposed rules would not agree with the Commission's spectrum allocation policy or decisions, or otherwise serve the public interest. Consequently, the Commission should adopt Progeny's Comments.

Respectfully submitted,

David G. Behenna  
PCS Partners, LP



Mark J. Tauber  
Michael A. Signorelli

DLA Piper Rudnick Gray Cary US, LLP  
1200 Nineteenth Street, N.W.  
Washington, D.C. 20036  
202-861-3900  
Its Attorneys

June 30, 2006